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Education Standards for Military Enlistment and the Search for Successful Recruits

by
Janice H. Laurence

HUMAN RESOURCES RESEARCH ORGANIZATION
1100 South Washington Street • Alexandria, Virginia 22314-4499

February 1984

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labeled as GED credential holders are required to meet minimum aptitude requirements that lie between the levels set for these groups. These policies were instituted and continue today because of research showing that high school diploma graduates adapt to military life better than do nongraduates or GEDs.

Primarily because of attrition differences, high school diploma graduates are the preferred applicants. Differential aptitude standards enable the Services to select from nonpreferred applicants those who are better qualified. Although attrition differences among education categories have been consistent, two issues remain. First, there are many educational credentials which are not easily classified into one of the three education categories. Data are practically non-existent on the military performance of persons with alternative credentials. The lack of an empirical basis for enlistment policies for persons with such credentials is exacerbated by the lack of uniformity in policies across Services and the absence of a consistent rationale for policies regarding the treatment of various credentials within a Service. Second, there is no sound evidence as to the reasons behind education category attrition differences, though non-cognitive factors are certainly indicated. Additional efforts may be successful in identifying nongraduates and GEDs with the best prospects for successfully completing their duty tours. Although recommendations for specific and detailed policy changes are not presently warranted, this report suggests that Service policies with regard to classifying education credentials should, among other characteristics, strive for consistency and an empirical basis.



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Foreword

To gain entry into the Military Services, United States citizens of appropriate age must be certified physically, medically, and morally fit; they must also possess sufficient aptitude to absorb training. Since the mid-1960s, the Services have also considered an applicant's educational level in conjunction with aptitude, in making enlistment decisions. Specifically, all four Services require non-high school graduates and General Educational Development (GED) high school equivalency holders to attain higher enlistment aptitude test scores than high school diploma graduates--the preferred group of applicants. This practice is based upon in-service performance, primarily, attrition differences between these educational groups. Failure to successfully complete the first term of service is approximately twice as likely among nongraduates as it is among graduates. Empirical evidence also shows that persons with GED credentials perform more like nongraduates than graduates in terms of attrition.

While the diploma is known to predict successful first-term behavior, just why this relationship holds is not known. Data are lacking on which background variables or individual characteristics associated with high school graduation increase a recruit's chances of performing well. Moreover, empirical evidence linking alternative credentials to attrition is practically nonexistent. Research shows only that there are performance differences among rather broad and ill-defined educational categories, that is, among individuals labeled high school diploma graduates, GED high school equivalency credential holders, and non-high school graduates.

Service education standards do not appear to have kept pace with the proliferation of secondary school credentials nationwide. To address these issues (as well as issues arising in the area of moral standards) the Directorate for Accession Policy, Office of the Assistant Secretary of Defense (Manpower, Installations, & Logistics) contracted with the Human Resources Research Organization (HumRRO) to review existing education and moral standards and to collect further information which could serve as an empirical foundation on which to base improved accession policies.

As part of this contract, entitled "Evaluation and Improvement of Educational and Moral Standards for Entry Into the Armed Forces", HumRRO reviewed the Services' existing education enlistment policies and the research upon which they are based. This report summarizes the findings of that review, and provides an analysis of some of the implications of the current education standards. Although comments on the policy of applying differential aptitude standards to various education credential enlistment categories appear, it is beyond the scope of this report to discuss or suggest the particular aptitude standards set by the individual Services for persons with the various education credentials. Additional reports issued as part of the Standards project will deal with the numerous secondary education credentials and the empirical evidence collected in this project on the military performance of individuals with various types of nontraditional credentials.

Many individuals contributed to this report. Dr. W. S. Sellman, Acting Director, Accession Policy, within the Office of the Assistant Secretary of Defense (Manpower, Installations, & Logistics) served as Technical Monitor for the Standards project and provided valuable guidance, comments, and suggestions with respect to this report. Discussions with Dr. Mark J. Eitelberg, Adjunct Professor in the Department of Administrative Sciences at the Naval Postgraduate School, proved most useful in the preparation of this report. Dr. Eitelberg shared his knowledge of the Services' education policies and provided valuable guidance. The support within HumRRO's Manpower Analysis Program--under the management of Dr. Brian K. Waters--proved invaluable. Particularly appreciated is the assistance of Dr. Barbara Means, Project Director, who provided comments on the draft report. Thanks are also extended to Ms. Linda S. Perelman, Research Associate, for her efforts in collecting information on educational credentials which proved useful in the context of this report. Ms. Dana Doran is commended as well for her excellent word processing skills.

The following Service policy representatives supplied HumRRO with information on the Services' education enlistment policies and reviewed the draft

version of this report: Mr. Louis A. Ruberton, Headquarters, Department of the Army; Mr. Charles R. Hoshaw, Office of the Chief of Naval Operations; Lt. Colonel James E. Watson, Headquarters, U.S. Air Force; and Major L. R. Jurica, Headquarters, U. S. Marine Corps. Their efforts are truly appreciated.

Summary

Over the years, research has shown that high school diploma graduates adapt to military life better than do non-high school graduates or persons holding a General Educational Development (GED) high school equivalency credential. The most researched criterion on the differential performance of diploma holders and those without this secondary school credential is first-term attrition. Failure of enlisted recruits to successfully complete their initial period of obligation is approximately twice as likely among nongraduates as it is among graduates. The probability of prematurely separating from service among GED credential recipients has been closer to that of nongraduates. For example, attrition rates (at the end of three years of service) for high school diploma graduates, GED equivalency credential holders, and non-high school graduates who entered the military in fiscal year 1979 were 22 percent, 45 percent, and 43 percent, respectively. Primarily because of these differences in attrition, high school diploma graduates are the preferred group of applicants.

While these attrition differences among education categories consistently appear, two important issues remain. First, there are many secondary education credentials which are not easily classified into one of the three education categories used in current enlistment standards (high school diploma graduate, GED, and nongraduate). Data are practically nonexistent on the military performance of persons with alternative credentials such as correspondence school diplomas, adult education diplomas, diplomas from nonaccredited schools, or equivalency credentials other than those based on the GED tests. The large number of nontraditional credentials combined with the lack

of an empirical basis for enlistment policies regarding persons holding these credentials has produced disparities across Services in terms of education credential policies. The resulting appearance of arbitrariness is exacerbated further by the absence of a consistent rationale for policies regarding the treatment of various credentials within a Service.

Second, despite the large, consistent differences between attrition rates for high school diploma graduates and other groups, there is no sound empirical evidence as to the reasons behind these differences. Educational achievement per se is an unlikely candidate since differential attrition rates across education groups persist when aptitude (as measured by the Armed Forces Qualification Test) is controlled. This finding supports the contention that noncognitive factors are responsible for predicting attrition. Thus, while the Services have a firm empirical basis for preferring to enlist high school graduates, the use of aptitude scores as the mechanism for selecting which nongraduates will be accepted for service is susceptible to challenge. Requiring higher minimum aptitude scores for non-high school graduates and GED credential holders (in comparison with high school diploma graduates) ensures only that candidates with higher scores will be selected for enlistment. The high attrition rates for nongraduates selected in this manner suggest that additional efforts are required to identify those nongraduates and GED credential holders with the best prospects for satisfactory military performance. However, until a better set of predictor variables (within education groups or for all applicants regardless of education category) is identified, current policies are likely to continue.

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Background

The Military Services are faced with the requirement of selecting individuals for service, classifying them into occupations, providing them with basic and advanced skill training, and assigning them to operational units. This process is performed for hundreds of thousands of applicants annually. The Services, like employers in the civilian sector, seek to recruit and select the best-qualified people available to fill requirements. They must continually trade-off recruit "quality" and "quantity", since in attempting to meet manpower requirements, the supply of top-quality applicants is often less than the Services seek. Thus, the individual Services set minimum qualification standards designed to meet mission personnel requirements without incurring excessive costs stemming from the enlistment of unsuitable recruits or the unnecessary exclusion of potentially successful young men and women.

A recent Department of Defense (1981) report to Congress on the subject of enlistment standards highlighted this very issue:

Military readiness depends, to a great extent, on the capabilities, discipline, and motivation of the young men and women in uniform. For this reason, a quality force is a priority objective. In an all-volunteer environment, the supply of manpower can be affected by enlistment standards. For example, if entry standards were raised, fewer people would qualify for service and, if requirements were not met, additional people would be more difficult and costly to recruit. Conversely, lower standards would allow more individuals to be available for recruitment (if they meet job requirements), but training costs would be higher and early discharges for unsuitability could be expected to increase. Enlistment standards, therefore, are a major issue. (p.1)

To qualify for military enlistment, applicants must meet minimum standards established on the basis of age, citizenship, physical and medical fitness, moral fitness, aptitude test scores, and education credentials. These standards increase the likelihood that new soldiers, sailors, marines, and airmen will be successful in adapting to military life, learning the skills of an occupational specialty, and performing their jobs. Further, because the "military" is not a single entity with a single mission, the Army, Navy, Marine Corps, and Air Force have different personnel requirements, which they translate into separate sets of specific entry standards.

The purpose of this report is to describe Service policies and practices regarding education standards for enlistment. The focus will be on the military's use of education criteria in conjunction with aptitude test scores to screen individuals for entry into the Armed Services. A brief literature review of the relationship between secondary education credentials (and a select few other demographic variables) and performance (e.g., attrition) in the military is also provided.

Indicators of Recruit Quality: Aptitude and Education Level

Two selection criteria, aptitude and education level, have been used as primary indicators of quality across all four Services (Cheatham, 1978; Department of Defense, 1981; Reeg, 1981; Toomepuu, 1981; Vitola, Guinn, & Wilbourn, 1977). Although their functions may not be entirely separate, aptitude test scores gauge the ability to absorb military training and perform the necessary job skills, while education level (based upon high school graduation status) is used mostly as an index of social adjustment

(Toomepuu, 1981) and to predict the likelihood of successfully completing a full term of service.

Aptitude testing of applicants for military service basically grew out of the experiences of World War II, where the military found it necessary to reliably estimate one's mental ability to predict trainability and usefulness for service (Department of Defense, 1980). The Armed Services Vocational Aptitude Battery (ASVAB), a battery of ten subtests measuring academic and vocational abilities, currently is used by all Services for selection purposes. The Armed Forces Qualification Test (AFQT), which consists of four of the ten ASVAB subtests (Word Knowledge, Paragraph Comprehension, Arithmetic Reasoning, and Numerical Operations), is a measure of general trainability. Minimum AFQT scores are set by each Service, and serve as the primary qualification standard. In addition, the Services also use other composites of ASVAB subtest scores as aptitude standards for various occupational specialties.

Beginning with the Air Force in 1961, the Services instituted differential aptitude standards based on educational attainment. By 1966, all four Services were using education criteria in conjunction with aptitude test scores to screen individuals procured through the draft as well as voluntary enlistments (Kim, Karpinos, Schwarz, & Slott, 1978). Specifically, non-high school graduates were required to achieve higher aptitude scores than high school graduates to qualify for service. This differential standard grew out of Flyer's (1959) work on unsuitability discharges of Air Force enlistees. Flyer (1959, 1963) found that high school graduates were much less likely than nongraduates to be discharged for failure to meet minimum behavioral or performance criteria. This result has been

corroborated in subsequent studies across all the Services (e.g., Cheatham, 1978; Elster & Flyer, 1981; Flyer & Elster, 1983; Sinaiko, 1977; Srull, 1974; Toomepuu, 1981) and has provided the rationale for the application of more stringent aptitude test score standards for non-high school graduates. The intent is to accept only the "best" (i.e., those with higher aptitude scores) from among non-high school graduates, a generally less-preferred group of candidates. Thus, while aptitude does not (and was not intended to) control attrition, it does provide a means by which to reduce the number of enlistment-eligible nongraduates.

Since the mid- to late 1970s, all of the Services except the Marine Corps have instituted differential aptitude requirements for a third education attainment level--the General Educational Development (GED) high school equivalency credential.¹ This equivalency credential is earned by passing a battery of five tests developed by the General Educational Development Testing Service of the American Council on Education.

All Services except the Marine Corps have set aptitude requirements for GED holders between the levels set for high school diploma graduates and those for nongraduates (as defined by the specific Service). The Marine Corps classifies GED holders as non-high school graduates, and requires them to have the same aptitude scores as other nongraduates. The Army's aptitude requirements for GEDs are only slightly less stringent than those for nongraduates. The Navy (in 1983) and the Air Force, on the other hand, will admit GED recipients with AFQT qualifying scores considerably lower than the minimum set for non-high school graduates.

¹Both Army and Navy regulations use the terms GED and High School Graduate interchangeably and distinguish this category from that of High School Diploma Graduate. This report refers to the former category as GED.

Table 1 shows the 1983 minimum aptitude standards² for each education category for enlistment into each Service. As the table shows, the difference in aptitude standards by education category varies markedly across Services. In the Army, for example, if an applicant has a high school diploma, he or she is required to achieve a minimum percentile score of 16 on the AFQT and a standard score of 85 (\bar{X} = 100, SD = 20)--roughly equivalent to the 24th percentile--on at least one Army ASVAB aptitude composite. If the applicant is a nongraduate, he or she is required to score at least 31 on the AFQT and a minimum of 85 on two aptitude composites. GED holders must also score at least 31 on the AFQT, but only have to achieve an 85 on one composite. In the Air Force, enlistment standards require high school graduates to achieve a minimum AFQT percentile score of 21, a percentile score of at least 30 on the General composite, and a combined (MAGE) composite score (including the Mechanical, Administrative, General, and Electronics Air Force ASVAB composites) of no less than 120. GED recipients and non-high school graduates must attain considerably higher AFQT scores--50 and 65, respectively. Thus, while there are no minimum educational requirements per se for non-prior service accessions, aptitude criteria are more stringent, and for some Services markedly so, for non-high school graduates and GED holders.

The remainder of this report concentrates on education rather than aptitude standards. The term education standards, as used in this report, refers to the grouping of education credentials into categories for enlistment purposes. As described above, the Services require different aptitude

²In addition to minimum aptitude standards, the Services may temporarily adjust aptitude requirements upward. These higher "cutting scores" operate to select the best from the applicant pool when, for example, there is a reduction in numerical requirements or when the recruiting market shows ample supply of top-quality applicants.

Table 1

**1983 Non-Prior Service Enlistment Aptitude Standards
(Required Operational Score on ASVAB 8 - 10) by
Sex and Education Level**

Service/Education	Minimum Standards			
	Males		Females	
	AFQT Percentile Score	Aptitude Composite Standard/ Percentile Score ¹	AFQT Percentile Score	Aptitude Composite Standard/ Percentile Score ¹
ARMY				
H S Diploma Graduate	16	85 on any 1	16	85 on any 1
GED	31	85 on any 1	31	85 on any 1
Non-High School Graduate	31	85 on any 2	31	85 on any 2
NAVY				
H S Diploma Graduate	17	2	17	2
GED or CPT	31	2	31	2
Non-High School Graduate	38	2	38	2
MARINE CORPS				
H S Diploma Graduate	21	GP = 80	50	2
Non-High School Graduate (including GED)	21	GP = 105	----- NOT ELIGIBLE -----	
AIR FORCE				
H S Diploma Graduate	21	G ⁴ = 30; MAGE ⁵ = 120	21	G ⁴ = 30; MAGE ⁵ = 120
GED	50	G ⁴ = 30; MAGE ⁵ = 120	50	G ⁴ = 30; MAGE ⁵ = 120
Non-High School Graduate	65	G ⁴ = 30; MAGE ⁵ = 120	65	G ⁴ = 30; MAGE ⁵ = 120

¹Minimum composite scores are expressed in terms of standard scores for the Army, Navy, and Marine Corps. Percentile scores are used in the Air Force.

²No minimum Service aptitude composite requirements for enlistment.

³General Technical ASVAB Composite.

⁴General ASVAB Composite.

⁵Mechanical, Administrative, General, & Electronics ASVAB Composites.

scores of individuals holding various credentials. The concern at hand, however, is with the grouping of the credentials rather than with the minimum aptitude scores required by the individual Services.

Adjustment to Military Life: The Rationale for Educational Standards

The high school diploma is used by the Services to predict "adjustment to military life", a criterion which is not as nebulous as it sounds. This catchall phrase encompasses many, more specific criteria, such as basic and technical training school performance, disciplinary infractions, time to promotion, leadership ability, attrition, and reenlistment eligibility, to name just a few. These performance measures have been found to vary with the educational characteristics of recruits (Hand, Griffeth, & Mobley, 1977).

Attrition

The most researched military performance criterion is first-term attrition. First-term attrition is the failure on the part of enlisted recruits to successfully complete their initial period of obligation; that is, they separate from service prior to the end of their contracted enlistment term. Reasons for, and classifications of, attrition vary. Adverse attrition is separation for failure to meet minimum behavior or performance criteria. Other types of attrition include medical disqualifications and dependency or hardship. As with many of the aforementioned criteria, the high school diploma is the best single indicator--presently and readily available--of a person's potential for adapting to the demands of military life as measured by satisfactory completion of the first term (Department of Defense, 1978).

This basic quality indicator is popular for many reasons, among them is its relative ease of measurement. While other performance criteria, such as supervisor ratings, may be criticized for being subjective, unvalidated, and confounded with other variables, no one would argue with the

contention that a recruit cannot be effective unless physically present for duty.

Attrition cost estimates. Attrition is often singled out as the primary rationale for using education credential screening criteria because of the excessive costs, direct and indirect, associated with it (Blandin & Morris, 1981). The estimated cost of attrition for those that entered the military during fiscal years 1974 through 1977 was \$5.2 billion in terms of lost investment in training, higher recruiting and salary costs, veterans' benefits, and unemployment compensation (General Accounting Office, 1980). Potential indirect costs of attrition include such factors as force instability, lowered morale, and lack of readiness. There are costs to the individual as well; people who separate from Service are marked as nonsurvivors. Such failure in general military service may significantly affect a person's future employment opportunities and earning potential (Abellera, 1976; Martin, 1977).

Increases in attrition since the All-Volunteer Force. While attrition is hardly a new problem for the military (Foch & King, 1977; Lockman & Warner, 1977), the advent of the All-Volunteer Force (AVF) in 1973 was accompanied by a growth in attrition of approximately 10 percent (Segal, 1981). By 1977, first-term attrition had emerged as one of the most serious and costly problems in the all-volunteer environment (Sheridan & Monaghan, 1980). The increase in attrition could be attributed to many variables, including longer enlistment terms and the implementation of trainee discharge programs for the rapid administrative discharge of marginal performers. Not reflected in the attrition rate per se is the additional cost of attrition in an All-Volunteer Force where manpower,

particularly high-quality manpower, is often scarce and recruits are costly. In a draft environment, persons who leave service prematurely can be replaced by simply pulling more recruits out of the manpower pool; in a volunteer environment, the Services do not have that option.

Most first-term attrition since the beginning of the AVF has been for adverse reasons, particularly for performance failure or disciplinary reasons. Furthermore, most first-term attrition is concentrated in the early phase (first six months) of enlistment (General Accounting Office, 1980). Attrition often occurs before a recruit has had time to become a truly effective servicemember. Failure to meet minimum behavioral or performance standards (Interservice Separation Codes 6, 7, and 8) includes such things as motivational problems, inaptitude, alcoholism, use of drugs, discreditable incidents, misconduct, fraudulent entry, and desertion or absence without official leave (AWOL) to name just a few (Goodstadt & Yedlin, 1980). Attrition for adverse reasons accounted for approximately 51 and 49 percent of the total force loss in fiscal years 1974 and 1975, respectively (Blandin & Morris, 1977).

There is considerable flexibility across Services as to exactly what constitutes grounds for discharge, how a discharge is coded, and the ease with which a discharge is given (Foch & King, 1972). The Air Force, for example, is more likely than the Army to grant an honorable discharge, regardless of cause (General Accounting Office, 1980). Attrition for diverse (and perhaps adverse) reasons may account for much of what is labelled administrative discharge. Basically, at present, a person who wants out badly enough can obtain a discharge either by building a case for poor performance or behavior or by openly requesting it (General Accounting Office, 1980).

Regardless of the variability in overall attrition rates across Services, policy studies repeatedly come up with the same conclusion. Of all the variables examined--age, race, AFQT score, sex, marital status, and so on--completion of high school is the single best predictor of first-term completion. This is not to say that variables other than education are not related to attrition. Attrition rates are lower for 18 and 19 year old recruits than for either 17 year olds or those over age 20 (Flyer & Elster, 1983; Srull, 1974). AFQT category is inversely, if weakly, related to attrition rate. Educational level is by far the best of these predictors and is easily applied as a criterion at enlistment.

The voluminous research on individual factors related to attrition has not been supplemented by a comparable body of research on organizational influences (such as leadership style, type of training, and appropriateness of duty assignment) that may attenuate attrition rates for those with less than a high school diploma (Elster & Thomas, 1981). The emphasis in attrition research has been on personnel selection--limiting the enlistment of certain broad groups of individuals--rather than personnel utilization.

Although it is recognized that the job itself as well as other qualities in the military system can exacerbate or reduce attrition, it seems easier and more cost effective to seek solutions on the selection side of the problem. Selection decisions and practice based on education can and do significantly reduce attrition and its associated costs to the institution and the individual. While most individuals do not question selective admission of applicants based upon standardized procedures into either military or civilian jobs, such practices must be empirically based, relatively free from bias, and continually evaluated.

Recent Attrition Research. A high school diploma graduate has almost an 80 percent probability of completing the first three years of service, while the probability for nongraduates is 60 percent (Department of Defense, 1981). The probability of attrition among GED credential recipients is generally closer to that of nongraduates (Elster & Flyer, 1981).

Table 2 shows attrition rates for male non-prior service accessions, who entered the military in fiscal years (FYs) 1977, 1978, and 1979, by educational level. These data show the consistent negative relationship between high school graduation and attrition. The mean 36-month adverse attrition rate (which accounts for most first-term attrition) among all non-high school graduate males over these three years was approximately 36 percent. The corresponding average for GED recipients was very close (i.e., one percentage point lower) to the nongraduate rate while the rate for male high school diploma graduates was markedly lower (i.e., 16 percent). Differential attrition rates by educational level hold across all four Services and all three years.

The relationship between educational level and attrition holds for females as well, although it is less-pronounced. As shown in Table 3, female high school graduate accessions in FY 1979 experienced a 32 percent attrition rate compared to 45 percent for female non-high school graduates and 47 percent for female GED holders. Compared with males accessed in FY 1979, females show higher overall attrition rates, but lower adverse attrition rates. While separations for adverse reasons account for approximately three-fourths of all early separations among males, it comprises less than half of female attrition. According to Flyer and Elster's (1983)

Table 2

**Percentage of Attrition Prior to Completing 36 Months of Service Among Male Non-Prior
Service Accessions by Service, Fiscal Year of Entry and Education Level**

Education Level/Number ¹	Service											
	Army			Navy			Marine Corps			Air Force		
	1977	1978	1979	1977	1978	1979	1977	1978	1979	1977	1978	1979
Non-High School Graduate	77,175	28,246	39,356	27,073	16,854	15,410	14,655	10,171	9,538	3,718	3,924	3,878
Adverse Attrition ²	39.3	34.4	37.2	37.1	29.2	32.5	30.8	28.6	33.9	36.6	36.1	37.7
All Attrition ³	47.9	42.0	43.6	46.0	35.7	39.6	41.8	38.8	42.9	48.5	46.7	46.0
GED High School Equivalency	5,731	3,784	6,330	5,860	4,440	3,763	1,464	872	989	2,307	3,960	4,536
Adverse Attrition ²	36.2	35.4	37.2	33.4	29.2	30.3	32.6	31.7	35.4	33.4	39.9	40.5
All Attrition ³	45.3	43.7	44.6	42.1	36.6	38.1	45.3	40.7	45.8	46.6	52.8	51.3
High School Diploma Graduate and Above	115,056	73,054	65,407	91,791	52,562	50,647	39,677	24,911	26,062	73,066	46,746	44,963
Adverse Attrition ²	17.8	16.6	16.8	15.5	14.0	15.8	13.7	15.0	16.7	16.4	16.5	16.6
All Attrition ³	23.9	21.8	21.2	22.0	19.7	21.0	23.0	24.2	24.5	23.3	22.0	22.8
Total	197,962	105,084	111,093	124,724	73,856	69,820	55,796	35,954	36,589	79,091	54,630	53,377
Adverse Attrition ²	26.7	22.0	25.2	21.0	18.4	20.2	18.7	19.3	21.7	17.8	19.6	20.2
All Attrition ³	33.8	27.9	30.5	28.1	24.4	26.0	28.5	28.7	29.9	25.2	26.0	26.9

SOURCE: Defense Manpower Data Center

¹ Bold face numbers refer to the total number of male accessions by educational category who entered the Service in the corresponding fiscal year.² Adverse Attrition includes attrition for failure to meet minimum behavior or performance standards: Interservice Separation Codes 6, 7, & 8.³ All Attrition includes total first-term separations except separation after successful completion of term and separation due to entry into officer programs: Interservice Separation Codes 1, 2, 3, 5, 6, 7, 8, & 9.

Table 3
Percentage of Attrition Prior to Completing 36 Months of Service
Among FY 1979 Female Non-Prior Service Accessions by Service and
Education Level

Education Level/Number ¹	Army	Navy	Marine Corps	Air Force	Total DoD
Non-High School Graduate	139	288	40	773	1,240
Adverse Attrition ²	24.5	16.3	10.0	25.1	22.5
All Attrition ³	40.3	30.2	35.0	51.6	44.8
GED High School Equivalency	27	1,038	23	1,556	2,644
Adverse Attrition ²	33.3	22.9	34.8	23.5	23.5
All Attrition ³	48.2	40.5	73.9	50.5	48.8
High School Diploma Graduate and Above	17,030	7,379	2,074	10,978	37,461
Adverse Attrition ²	18.4	12.9	19.0	10.4	15.0
All Attrition ³	39.4	25.6	44.8	21.9	31.9
Total	17,199	8,705	2,137	13,307	41,345
Adverse Attrition ²	18.5	14.2	19.0	12.8	15.8
All Attrition ³	39.4	27.6	44.7	27.0	33.2

Source: Defense Manpower Data Center.

¹ Bold face numbers refer to the total number of female accessions by educational category who entered the Service in the corresponding fiscal year.

² Adverse Attrition includes attrition for failure to meet minimum behavior or performance standards: Interservice Separation Codes 6, 7, & 8.

³ All Attrition includes total first-term separations except separation after successful completion of term and separation due to entry into officer programs: Interservice Separation Codes 1, 2, 3, 5, 6, 7, 8, & 9.

analysis of Defense Manpower Data Center (DMDC) FYs 1973-1978 data, pregnancy discharges account for most of these sex differences in attrition. Furthermore, were it not for pregnancy discharges, the pattern of differences in attrition rates between females at different educational levels would more closely match the pattern for males. The lower adverse attrition rates for female nongraduates and GEDs (in contrast to their male counterparts) may be attributable to the greater selectivity of the Services in procuring non-high school graduate and GED females. This greater selectivity is facilitated by the small proportion of women enlisted relative to men in all Services. (The Services' non-prior service accessions were 13 percent female and 87 percent male in FY 1977.)

A word of caution in interpreting attrition data is offered here. Categorizing causes for attrition by Interservice Separation Code (ISC) titles as is the case for Tables 2 and 3, may underestimate adverse attrition rates. For example, ISC 9 (other separations or discharges) includes causes ranging from sole surviving son to erroneous enlistment and breach of contract. Some of these separations could be considered adverse, but by convention, adverse attrition rates have included only ISCs 6, 7, and 8 (as in Tables 2 and 3). ISC 4, separation because of entry into officer programs, certainly should not be construed as failure or lack of perseverance, but is sometimes included in estimates of total attrition rates. (It is not included under "all attrition" in Tables 2 and 3.) Researchers have differed in the codes that they have included in their tabulations of attrition and of adverse attrition, making comparisons of data across studies difficult.

Other Military Adjustment Measures

The other measures of adjustment to military life have received less study, but available research suggests that education category is similarly predictive for them. For example, non-high school graduates characteristically experience more disciplinary, administrative, and retraining actions (Department of Defense, 1974; General Accounting Office, 1976). Courts martial and nonjudicial punishments occurred among non-high school graduates at rates 1.5 to 3 times more often than among graduates during the late 1960s. Furthermore, high school dropouts were reported to be 15 to 20 percent less productive on the job according to another more recent study (Cooper, 1977). With AFQT category held constant, graduates characteristically are promoted faster than nongraduates (Greenberg, 1980).

In general, military performance data (particularly on attrition) showing differences between education categories provide the rationale for enlistment screening practices which differ according to education level. The purpose of education differentials is not to eliminate the enlistment of all non-high school graduates and GED recipients, since manpower demands often exceed the supply of available and willing high school graduates (Vitola, Guinn, & Wilbourn, 1977). By combining aptitude and education requirements, the military hopes to select from among non-high school graduates and equivalency certificate holders, those who have better chances of adapting to military life and successfully completing their contracted term of enlistment.

Characteristics Associated with Military Success and High School Completion

Although it is clear that the high school diploma is a good predictor of military performance, it is not clear that education or schooling itself is the important factor. The high school diploma generally indicates only that a student has finished a required course of study and has passed all the necessary tests--not the extent to which he or she has learned particular subjects. Not only can quality of education or level of aptitude not be vouched for by the receipt of a diploma, but the Services do not rely on this credential to indicate such. Cognitive ability is assessed via the Armed Services Vocational Aptitude Battery (ASVAB). The diploma is generally regarded as measuring other important noncognitive factors related to service success. One piece of evidence that noncognitive factors account for most of the diploma's predictiveness comes from the persistence of differential attrition rates between graduates and nongraduates after aptitude is controlled.

Table 4 shows, as do numerous other studies (see, for example, Department of Defense, 1981; Flyer & Elster, 1983; Guinn, 1977; Hiatt & Sims, 1980; Martin, 1977), that high school diploma graduates in the lowest acceptable AFQT category experience lower attrition rates than nongraduates in the two highest aptitude categories (e.g., 26 percent vs. 41 percent, respectively). While it is true that within educational levels, attrition rates tend to be inversely related to AFQT category, the relationship is rather weak, particularly among nongraduates. If mental ability were the critical factor, one would expect AFQT scores to be at least as predictive as the high school diploma.

Table 4

**Percentage Attrition Prior to Completing 36 Months of Service Among
Fiscal Year 1979 Male Non-Prior Service Accessions by
Service, Education Level and AFQT Category**

Education Level and AFQT Category ¹	Service				
	Army	Navy	Marine Corps	Air Force	Total DoD
Non-High School Graduate					
AFQT Categories I & II	41.1	38.4	37.8	47.3	40.5
AFQT Category IIIA	43.0	39.5	41.8	45.3	41.5
AFQT Category IIIB	43.5	41.5	44.7	43.1	43.2
AFQT Category IV	44.2	41.1	45.5	43.2	44.1
GED High School Equivalency					
AFQT Categories I & II	45.1	35.4	34.3	43.4	39.8
AFQT Category IIIA	46.1	39.7	48.1	50.4	46.5
AFQT Category IIIB	44.5	40.6	51.1	54.8	48.0
AFQT Category IV	43.7	40.6	51.1	59.8	45.5
High School Diploma Graduates and Above					
AFQT Categories I & II	15.4	16.6	19.4	18.7	17.3
AFQT Category IIIA	20.6	19.6	22.9	23.8	21.6
AFQT Category IIIB	22.5	21.9	24.1	25.2	23.4
AFQT Category IV	23.3	27.5	29.5	27.4	25.6

SOURCE: Defense Manpower Data Center.

¹Armed Forces Qualification Test (AFQT) Categories I & II refer to percentile scores ranging from 65 to 99; AFQT Category IIIA from the 50th to 84th percentile; AFQT Category IIIB from the 31st to the 49th percentile; AFQT Category IV from the 10th to the 30th percentile.

It seems logical to suppose that the social attributes and experiences which enable a student to complete high school are the true indices of an individual's probability of fulfilling the first term of service. That is, perseverance, maturity, participation in group learning situations, tolerance and adaptability to rules and regulations, and determination, as well as other possible factors involved in completing high school--rather than whatever educational attainment is represented by the diploma--may be the true correlates of individual success in the military.

When former high school students are asked why they left high school before graduation, their reasons vary widely. Some of the reasons may involve economic hardship, family problems, poor grades (and/or poor motivation), interpersonal difficulties, absenteeism, or a history of school

expulsions or suspensions (Rumberger, 1983). Research aimed at uncovering the reasons for (or at least more precise correlates of) attrition from the military may fare well by examining the relationship between these experiences (and other biographical variables) and subsequent adjustment to military life. Perhaps specific school background variables or "trouble spots" which contributed to a student's poor adaptation to school are indicative of potential problems with adaptability to yet another highly structured organization--the military.

There are some research studies which have examined more precise education correlates of military performance criteria. High school grades, course preferences, participation in school activities, and school disciplinary incidents are among the variables which evidence suggests may be predictive of military performance, particularly attrition. For example, among a sample of Navy submarine school attendees, high school grades were correlated negatively with Navy school failures (Noddin, 1969). Similarly, Greenberg, Murphy, and McConeghy (1977) found that, even when educational category was controlled for, Navy and Marine Corps recruits who separated early from service reported lower grades and academic skills than were reported by survivors.

Participation in school activities and team sports has also been found to be related to attrition. Noddin (1969) found that those who completed submarine school were more likely to have held an elected office in school. Having hobbies and holding club offices are reported to be significant predictors of effectiveness in the Navy among those in AFQT Category IV (Plag, Goffman, & Phelan, 1967). Through interviews with persons separated from service under the Army Trainee Discharge program and members of a control

group, Bauer, Miller, Dodd & Segal (1975) concluded that those who were discharged were less likely to have participated in school clubs, scouts, or team sports.

There is some evidence to suggest that school discipline may be related to attrition as well. Among recruits entering the Navy in 1960, school suspensions and expulsions were found to be correlated positively with failure to complete a full enlistment term and to obtain a reenlistment recommendation (Plag & Goffman, 1966). In the Air Force, airmen who left service before completing their full term reported playing hooky and having trouble with teachers more than those who completed their duty term (Guinn, Johnson, & Kantor, 1975). The Educational and Biographical Information Survey developed and administered as part of this project will provide more detailed information concerning the school experiences, family backgrounds, and adolescent experiences of nongraduates and graduates applying for and entering military service. (This self-report biodata instrument was used to gather educational and other background information on approximately 75,000 applicants and recruits in the Spring of 1983.)

Successful Nongraduates and GEDs

Dropping out of school or not possessing a diploma does not automatically mean that a person will prematurely leave the military. The finding that as a group, GED recipients and non-high school graduates show higher attrition rates than high school diploma graduates does not mean, of course, that all individuals in the former groups are poor risks for military service. As Table 2 shows, the majority of accessions without a high

school diploma are successful service members. Relatively little is known however, about the variables related to differential success rates within educational groups.

Several studies have investigated the relationship between actual years of school completed and attrition. Generally, the findings are that the higher the level of formal education (i.e. through high school) the less likely a person is to separate from service (Blandin & Morris, 1977; Greenberg & McConeghy, 1977; Guinn, 1977; Matthews, 1977). Thus, nongraduates who complete 11 years of school are better risks than those who complete 10 or fewer years.

A 1976 study of Marine Corps recruits discharged in fiscal years 1975 and 1976 for adverse reasons revealed that for a given high school graduation status (i.e., high school graduate, nongraduate, or GED), the probability of successfully completing the enlistment term varied by state (Packard, 1976). Although such findings could be interpreted as the results of differential "educational" experiences related to success in the military, this remains unclear since the populations served by education systems vary across states and academic experiences and program requirements vary widely even within a state.

Certainly, to cease enlisting all non-high school graduate and GED applicants is not a practical solution to the attrition problem. The majority of nongraduates and GEDs perform well in service (not to mention the fact that many graduates do indeed contribute to attrition rates), and their recruitment is often necessary in meeting force requirements and filling positions. The attempt to uncover the characteristics associated with

high school completion may not produce military performance predictors equal to or better than the high school diploma, but it should at least uncover predictors which will be useful in identifying the best risks from among those who do not possess a high school diploma. Such information would allow the judicious enlistment of members of these nonpreferred groups.

Educational Credentials and Enlistment Policy

Not only are data lacking on which background variables or individual characteristics associated with high school graduation increase a recruit's chances of performing well, but empirical evidence linking alternative credentials to attrition is practically nonexistent. Previous research has shown only that there are performance differences among rather broad educational categories; that is, among individuals labeled high school diploma graduates, General Educational Development (GED) high school equivalency certificate holders, and non-high school graduates.

Today's Secondary Education Credentials

Individuals applying for military service may possess a wide variety of education credentials and experiences. The requirements for (and therefore the definition of) the diploma itself are different throughout the nation--between states, between school districts, and, in some instances, even between schools within the same district.

The most widespread path to the diploma is the traditional classroom approach which consists of a planned 12-year sequence of courses taught by state-approved teachers. Students progress through this sequence (usually in lockstep fashion) along with their peers towards the completion of formal requirements. Certificates of completion, or similar credentials may be issued in lieu of a diploma in those schools which engage in competency testing. Thus, rather than a diploma, these "alternative" credentials are issued to those who meet all graduation requirements except a passing score on a competency test. Some schools issue certificates of

attendance to students who complete 12 years of school but lack the required number or distribution of credits or the minimum grade point average needed to receive a diploma.

Other types of high school programs or alternative paths to the diploma are available to typical high school age students within public and private high schools. Examples include vocational or technical programs and credit for out-of-school experiences, such as work apprenticeships or community service. These alternative paths seem to use a more individualistic approach to education. Although some residency requirements remain, education under such programs is not necessarily synonymous with the traditional definition of schooling.

Distinctions can be made also between state-recognized and/or accredited and nonaccredited high schools. The most common set of standards for state accreditation involves curriculum content, number of credits required, and state approval or certification of teachers. While public schools must comply with accreditation standards, private schools do not necessarily have to seek accreditation, although many do. It is difficult to determine which high schools are not recognized or accredited since state departments of education do not, by and large, keep files on unrecognized schools. "Christian" schools are a very vocal segment among non-accredited schools. Many of these schools (which tend to be run by fundamentalist churches) are not accredited or state-approved because they refuse state review of their curriculum or teachers. There are different types of Christian education programs, ranging from the traditional lock-step, graded schools to individualized, ungraded schools.

Correspondence school diplomas and certificates represent another entity in the educational spectrum. This type of school, while it may share many of the "regular school's" academic and course requirements, differs sharply in its attendance requirements and in the social experiences that students receive. A diploma can be obtained within a relatively short period of time and without sitting at a school desk.

GED testing is perhaps the best known method of obtaining a high school equivalency credential. Based solely upon testing, individuals can earn this "legal" equivalent to the high school diploma if they attain the minimum scores set by their state.

Adult education programs provide yet other means by which individuals can earn a high school credential. Some adult programs are said to be duplicates of the typical high school experience except that classes are usually held in the evening. Other adult programs have more in common with the GED--they award credentials on the basis of credits given for experiential learning and/or performance. External diploma programs, which commonly emphasize credit for life experiences, tend to fall into this latter category. (For a more detailed description of secondary education credentials, see Laurence, 1983.)

Definitions of Education Level for Enlistment

In light of the multitude of diplomas, certificates, and other secondary education credentials that exist today, the classification of individuals as graduates or nongraduates has become problematic for the Military

Services. At present, there is no comprehensive or Service-common definition of the circumstances or credentials that allow military applicants to be labelled high school graduates and thus to be preferred for enlistment. Table 5 presents current Service policies with respect to the treatment of the most common secondary school credentials for enlistment purposes. Service education enlistment policy differences are apparent for nonaccredited diplomas, attendance and completion certificates, GED certificates, certificates based on the California High School Proficiency Examination (CHSPE), and correspondence school certificates. For example, all Services except the Air Force enlist persons from nonaccredited secondary schools as high school diploma graduates. With the exception of the Navy, correspondence school graduates are treated as diploma graduates. Individuals who have earned a certificate of proficiency based upon passing the CHSPE are treated as nongraduates in all Services except the Air Force, which defines them as graduates for enlistment purposes.

Appendices A through D contain excerpts from each of the Services' current regulations, indicating how individuals with various credentials and other types of educational documentation are classified for enlistment. The most comprehensive set of definitions has been developed by the Navy, and the Army is not far behind. The Marine Corps and particularly the Air Force are more general in their regulations regarding education category definitions, and are less comprehensive with regard to the multitude of secondary credentials available today.

It is not clear, of course, whether comprehensiveness is a good quality and vagueness a bad quality in the education standards domain. Extremely detailed definitions of the many circumstances and credentials

Table 5

**Treatment of Secondary School Education Credentials for
Enlistment Purposes During FY 1983, by Service**

Secondary School Credential	Treatment for Enlistment Purposes*			
	Army	Navy	Marine Corps	Air Force
High School Diploma (State Accredited)	Grad	Grad	Grad	Grad
High School Diploma (Non-State Accredited)	Grad	Grad ¹	Grad	Non
High School Attendance Certificate	Grad	Grad	Grad	Non
High School Completion Certificate	Grad	Grad	Grad	Non
GED Certificate	GED ²	GED ²	Non	GED ²
High School Diploma Based on GED	GED ²	GED ²	Non	GED ²
Adult High School Diploma	Grad ³	Grad ⁴	Grad ⁵	Grad ⁶
California High School Proficiency Examination (CHSPE) Certificate	Non	Non	Non	Grad
Correspondence School	Grad ⁷	GED	Grad ⁷	Grad ⁸

SOURCES: Department of the Army (DAPE-MPA-CS), Memorandum for Director, Accession Policy, OASD(MRA&L), 29 June 1982. Department of the Navy (OP-135L/0527:rk), Memorandum for Director, Accession Policy, DASD(MP&FM)(AP), 7 July 1982. Department of the Navy Headquarters United States Marine Corps (MPP-39-msh, 5000/1), Memorandum for the Assistant Secretary of Defense (MP&FM), 29 June 1982. Department of the Air Force (MPXOA), Memorandum for Director, Accession Policy, OSD(MRA&L) (MP&FM), 30 June 1982 version of this table appears in Janice H. Laurence, *Educational Credentials and Military Enlistment*, presented at the Annual Meeting of the American Educational Research Association, Montreal, April 1983. This updated version was obtained through subsequent communication with the offices listed above.

*Grad is high school diploma graduate. GED is high school equivalency. Non is non-high school graduate.

¹Enlisted as high school diploma graduates on a case-by-case waiver basis.

²Enlisted under standards separate from both high school diploma graduates and nongraduates but reported as non-high school graduates.

³Enlisted as high school diploma graduates provided that the diploma was awarded or authorized by the state.

⁴Enlisted as high school diploma graduates provided that the program is recognized by the state.

⁵Only individuals accessed as part of test programs (to determine success rates of adult high school programs) are enlisted as high school diploma graduates; all others are enlisted as non-high school graduates.

⁶Enlisted as high school diploma graduates provided that the diploma was not issued as a result of the GED test only.

⁷Enlisted as high school diploma graduates provided that the course/program is accredited by the National Home Study Council.

⁸Enlisted as high school diploma graduates provided that the school is accredited by the state or jurisdiction.

which result in classification as a high school diploma graduate, GED (or high school graduate), or nongraduate imply that empirical evidence on the military performance of individuals with these alternative credentials abounds. Indeed it does not. Although they may entertain hypotheses, the Services do not know with empirical certainty what it is about the completion of the high school experience and/or the individuals who graduate that makes them perform well in the military, and hence they can only conjecture about the military performance of those with nontraditional educational experiences. Vague definitions may be a bit more realistic, in that they do not suggest such a high degree of predictive precision; however, such definitions could lead to inconsistent application of enlistment standards within an individual Service.

Despite the fact that enlistment policies with regard to today's variety of secondary education credentials are not entirely empirically grounded, the Services continue to stipulate how alternative credentials should be classified. Education policies are based in large part on the untested notion that attendance through 12 years of school (or "seat time") accounts for the diploma's predictiveness. In keeping with this belief, the Army, Navy, and Marine Corps consider individuals who possess high school certificates of attendance or completion as high school diploma graduates. Their reasoning here is that although such persons did not pass a competency test or complete certain academic requirements, they did not drop out of school but rather displayed perseverance and stayed in school until their class had graduated. The Air Force, on the other hand, believes that successful completion of all requirements is crucial.

The "seat time" hypothesis is not applied consistently in setting Service education enlistment policies, however. In the Army, Air Force, and Marine Corps for instance, applicants without high school diplomas need only obtain a diploma from a correspondence school home study program (accredited by the National Home Study Council) and they can be enlisted as diploma graduates despite the lack of attendance requirements needed to obtain this credential. These Services choose not to recognize most equivalency certificates as practical substitutes for the diploma, yet, at the same time, allow persons who complete the more loosely regulated and controlled home study programs to qualify as high school diploma graduates.

Furthermore, all Services allow nongraduates who have completed varying amounts of college coursework to apply for enlistment as high school diploma graduates. Similarly, Army and Navy regulations invite persons who receive state-authorized diplomas from adult education programs to apply for entry as high school diploma graduates.

Persons with GEDs are not treated as high school diploma graduates for enlistment purposes in any of the Services.³ The Marine Corps enlists GED recipients under the standards set for nongraduates, and the other Services require them to meet standards which are between those set for diploma graduates and nongraduates in terms of restrictiveness. As discussed previously, enlistment policies with respect to GEDs can be justified on the basis of evidence concerning GED credential holders' military performance.

³For the most part, GED equivalency credential holders are treated as high school diploma graduates for classification and assignment purposes.

However, evidence concerning the performance of holders of other test-based equivalencies is lacking. Nevertheless, with the exception of the Air Force, the Services have generalized the GED attrition rate findings to other testing-based equivalency certificates and thus do not enlist holders of these certificates as high school diploma graduates either.

It is interesting to note, that although the Army does not enlist persons with GEDs as diploma graduates, a person from a foreign high school may be enlisted as a high school diploma graduate provided he or she passes the GED tests. It appears that equivalency testing is used here to validate academically the foreign diploma. Such a policy seems unnecessary since the AFQT, not the diploma, is used to gauge academic or cognitive ability. Furthermore, the regulations do not mention whether foreign high school diplomas are scrutinized to determine whether they are based upon consistent attendance through an educational program.

Enlistment policies with regard to persons who hold diplomas from non-accredited (mostly Christian) private high schools are also incongruent with the "seat time" hypothesis. Regardless of whether such graduates have demonstrated a consistent pattern of attendance, the Air Force currently does not enlist such persons as high school diploma graduates. In contrast, Army, Navy, and Marine Corps regulations do not specify that a high school diploma must be from an accredited or state-recognized school to be defined as a diploma for enlistment purposes. Again, empirical evidence indicating that seat time is a viable hypothesis does not exist, therefore (as is the case for other credentials), there is no correct way to classify graduates of nonaccredited schools.

The various credential titles and forms of educational program documentation compound the problems associated with classifying alternative credential holders as high school diploma graduates, GEDs, or nongraduates. For example, persons who pass the GED tests or participate in adult education or external diploma programs (to name just a few) may obtain a high school diploma--from their local high school--which is indistinguishable from a diploma earned through a more traditional approach. Similarly, high school diplomas from nonaccredited secondary schools may be mistaken for credentials from accredited schools. Differences in terminology may or may not reflect program differences. A school may be registered in a particular state but not be "accredited" or "recognized" by the state. To ensure that enlistment practice adheres to current policy, recruiters may have to scrutinize more closely the diplomas, certificates, transcripts, and official letters offered by applicants as evidence of their graduation status.

Remembering the Objectives

Overall it seems that a state of confusion exists concerning Service education standards for enlistment. Because of the academic connotation of an educational experience or credential, it is easy to lose sight of the fact that, for the military, the diploma is used to predict successful completion of the first tour of duty rather than to indicate cognitive ability. Further, confusion stems from the lack of information on the exorbitant number of secondary education credentials and experiences. Clearly the variation in credentials now offered throughout the country is quite substantial and is largely responsible for less than perfect enlistment standards. Straying from the main purpose of education standards--to ameliorate costly attrition by selecting applicants who are statistically

good risks--could lead to enlistment policies which are ineffective and difficult to justify. Getting sidetracked by issues of the quality of education credentials and programs (and the academic ability of those who possess them) could make it difficult for some groups of applicants who would perform well if accepted to qualify for service while accepting as preferred applicants others who are generally poor performance risks.

While all four Services have basically the same objectives for their educational standards, each applies them in a distinctive fashion. This lack of uniformity in education credential groupings and definitions makes it difficult to determine the exact eligibility criteria that individuals with less than traditional education credentials will be required to meet. The current education standards applied by the Services are in need of refinement to adapt to the substantial changes that have occurred in the secondary school systems of this country over the past two decades.

Concluding Note: Prospects for Change

Manpower Trends

Although the Services prefer to recruit and enlist high school graduates, the "quality" of accessions varies with manpower supply and demand. More GEDs and nongraduates, for example, are accessed during the months of February through May, a period when fewer high school diploma graduates are available for enlistment (Defense Manpower Data Center, special tabulations). Environmental factors such as the state of the national economy and unemployment rates, the relative levels of military and civilian wages, enlistment incentives, recruiting resources, and attitudes toward military service all affect the effective size of the applicant pool. By adjusting the aptitude cutting scores required of various education groups, the Services can enlist the highest quality applicants available to fill required jobs. In a favorable selection environment, when there is an abundance of volunteers having the desired educational and aptitude levels, the stringency of the enlistment standard is not of major concern. If the market is unfavorable, the Services may choose to accept more minimally qualified applicants to meet personnel needs. Thus, there is an inverse relationship between the economic health and affluence of the nation and the ability to attract an adequate number of well-qualified youth into military service (Toomey, 1981).

From FY 1981 to FY 1983, the Services experienced a recruiting and retention boom; that is, not only were manpower requirements met in terms of sheer numbers, but the quality of accessions rose as the Services could afford to be more selective and to accept better qualified applicants for enlistment.

In fact, individuals who entered the Service in FY 1983 had the highest average AFQT score for new recruits since the termination of the draft in FY 1973. There was also an increase in the proportion of high school graduates enlisted to 91 percent making this the highest proportion in history (Department of Defense, 1983).

However, despite the recent favorable recruiting and reenlistment experience, the capabilities of one or more of the Services to man the forces under volunteer policies are likely to meet severe tests in the mid to late 1980s. Three manpower trends are likely to continue or emerge during that time period. First, the projected decrease in the 17- to 21-year-old male population, from which most enlisted accessions are drawn, is a cause of great concern among military manpower planners and policymakers. The difficulties faced by Service recruiters in the coming decade may even worsen if economic growth occurs and national youth unemployment rates descend. Second, the recent program and budget decisions to modernize and increase the readiness of the Services are expected to be sustained. Increasing demands, therefore, are likely to be placed upon the number of recruits needed and the standards of performance expected from individual servicemembers. (These demands may be offset to some extent by improved retention and reenlistment rates.) Third, overall budgetary constraints are likely to be asserted further, and continuing pressure will be applied for further improvement in the cost-effectiveness and efficiency of the military personnel system.

With such predictions for the current demand-constrained market to become increasingly supply-constrained over the next decade, the Services

(particularly the Army) no doubt will not want to restrict their manpower pool unnecessarily. Imposing the more stringent aptitude standards required of nongraduates on holders of other types of secondary education credentials may eliminate unnecessarily many individuals who would become successful servicemembers if enlisted. On the other hand, treating other education groups in a preferred manner may be adding unnecessarily to attrition costs. Rethinking education enlistment policies may be useful in remedying these situations.

The Educational and Biographical Information Survey

The Human Resources Research Organization (HumRRO), under contract to the Department of Defense, is currently performing research pertaining to the military's education entry standards. HumRRO recently developed the Educational and Biographical Information Survey (EBIS) which was administered to approximately 35,000 military applicants and 40,000 new recruits in the spring of 1983. One purpose of the EBIS administration was the identification of individuals holding nontraditional education credentials. As these individuals move through their first term of military service, information will be available on their military performance, permitting an empirically based classification of education credentials. In addition, the EBIS contains questions dealing with education experiences, employment history, family background, and pre-service experiences. Past research has demonstrated the pervasive predictive powers of high school graduation status. The effects associated with other individual characteristics tend to be masked by the overwhelming size of the high school graduation variable. The greatest promise of the EBIS data set may be in identifying

predictors of successful military performance within education groups. The data may reveal which types of high school experiences, encounters with school officials, job histories, and so on, are most frequently associated with subsequent satisfactory adjustment. The latter information should be particularly valuable in predicting the best risks from among the pool of non-high school graduates. This may enable greater use (i.e., increased enlistments) of currently "less preferred" military applicants, particularly in the not-so-favorable recruiting market anticipated towards the end of this decade.

Problems with Education Standards: A Synopsis

Many of the problems with the Services' education standards stem from the lack of an empirical base for categorizing alternative credentials, a problem the EBIS data may help ameliorate. Lacking the needed evidence, the Services have had to base their policies on "logic". Most Services indicate that they classify holders of various new credentials with high school diploma graduates or nongraduates according to the "seat-time" hypothesis. That is, if a credential is based upon consistent attendance through an education program, it is to be considered equivalent to a bona fide diploma for enlistment purposes. While this policy-guiding hypothesis may be attractive (and possibly accurate), it is not supported by data. Further, the hypothesis has not been applied consistently and the Services classify the same credential in different ways. Under these circumstances, no compelling justification of enlistment standards can be made on the basis of logic.

Inconsistencies and fuzzy categorizations could be eliminated by treating holders of all alternative credentials as non-high school graduates. The benefits derived from this change in policy in terms of reducing confusion should be weighed against its costs, such as the elimination of a number of individuals from the eligible manpower pool (because of failure to attain the higher minimum aptitude score). In addition, the political effects of such a policy shift should be weighed. Most likely, various education groups, Congressmen, and individuals would create an uproar if applicants with various credentials were assigned a less-preferred status for enlistment purposes.

Some political pressures have surfaced because of a lack of understanding as to why credentials are taken into consideration at enlistment. It is important for the Services to convey the fact that the military is not (and should not be) passing judgment on the academic quality of a credential or education experience. Enlistment regulations should explain that individuals with certain (for the most part traditional) credentials are considered diploma graduates and are enlisted under less stringent aptitude standards not because of any presumed greater intellectual achievement but because, as a group, they are more likely to fulfill their contracted enlistment term.

In addition to the problems associated with grouping education credentials into one of the three categories used currently, there are questions as to the appropriateness of applying different aptitude standards to these groups. The logic of minimizing the enlistment of poor performers is not questioned. What can be questioned is the logic of simply applying differential aptitude minimums. Higher aptitude scores required of GEDs and

nongraduates do not eliminate their higher attrition rates. While this practice tends to bring in relatively bright members of these nonpreferred groups, it does little to reduce the high attrition rates of GEDs and nongraduates. The identification of personal characteristics associated with military perseverance among nongraduates and GED holders is one of the objectives of the Standards project.

Although, as described in this report, there are problems with the Services' educational standards, it should be remembered that the basic distinction between graduates and nongraduates works very well. Without an equally predictive or better substitute, the Services will want to maintain their educational screening practices.

Recommendations

Four general recommendations come out of this review of educational enlistment standards. In examining their policies in this area, HumRRO recommends that the Services consider:

- striving for greater consistency across Services in education classifications used for enlistment purposes,
- basing education classifications upon empirical data on the military performance of holders of various education credentials,
- keeping the classification system as simple as possible, with no more classification categories than can be clearly defended on the basis of performance data, and
- maintaining accurate records employing a consistent set of education codes designating the particular type of education credential held by each accession across all four Services.

The Services set their own enlistment standards, and the use of different minimum aptitude scores by various Services does not appear to cause

difficulties. However, differences across Services in the way in which various education credentials are defined have created confusion and have made Service policies difficult to defend. In the absence of evidence concerning the military performance of holders of many nontraditional diplomas and certificates--yet alone the absence of data on their differential performance across Services--it is hard to explain why a particular credential or certificate holder is treated as a diploma graduate in some Services but not in others. Greater consistency in how credentials are classified would reduce confusion in the minds of military recruiters and enlistment counselors as well as those seeking to enlist. It would also make enlistment standards with regard to nontraditional credentials easier to evaluate by increasing the comparability of data across Services, and make Service policies easier to explain and justify to Congress, the education community, and the public.

The Services' ability to justify their education standards will be vastly improved also if those standards can be clearly based upon empirical evidence concerning the military performance of holders of various education credentials. While there are abundant data concerning the performance of holders of traditional high school diplomas and GED certificates as well as of those who hold no credential, evidence regarding those who have earned various nontraditional credentials is largely lacking. As mentioned above, the collection of such evidence was one of the major reasons for the development and administration of the EBIS. As the performance data on EBIS respondents become available, they will be described in a future report highlighting the differential military attrition rates for holders of various nontraditional education credentials.

When revising education standards, HumRRO recommends that policymakers adopt the principle of parsimony in deciding upon the number of education classifications to employ. The larger the number of categories used in enlistment standards, the more data are needed to justify placing a credential in one category rather than in any of the others. New categories should not be created unless the individuals to be placed in that category have clearly performed both significantly better than those in the next lower category and significantly more poorly than those in the next higher category, over repeated samplings. When in doubt between a simpler classification system and a more complex one, the Services should remember that a simpler system is easier to validate, administer, and justify.

Finally, whatever decisions are made concerning classification of education credentials for enlistment purposes, HumRRO recommends that careful records of individuals' education certificates be maintained. In addition to the classification as a diploma graduate, GED, or nongraduate, each accession's DMDC file contains a code for number of years of education. Currently, however, the particular type of credential held, such as adult education diploma, is not coded for DoD purposes in the case of many nontraditional credentials. Not only are these individuals lumped in with those holding other types of credentials, but, because the Services classify credentials differently, holders of the same nontraditional credential may have different education codes on their DMDC records depending upon the Service in which they enlisted. Thus at present there is no way to follow up the military performance of certain credential holders to compare it to that of holders of regular diplomas or of other certificates. The EBIS data will be useful in developing education classifications, but the number of people in the sample

holding certain credentials of interest (e.g., certificates of competency) will be relatively small. Moreover, the types of people holding various credentials may change over time (in some cases, in response to changes in enlistment standards). DoD and the Services will need to monitor the performance of holders of various education credentials in order to evaluate their policies on an on-going basis.

Education enlistment standards provide an invaluable screening tool over and above aptitude test scores. Unlike aptitude scores which enable a straightforward ranking of individuals and the meaning of which is consistent over time, education credentials possess little invariant qualities. Clearly the meaning of secondary education credentials--particularly the diploma--does and has changed over the years. The value and accuracy of education policies can be spared substantial compromise provided that the Services update them particularly in light of changes in secondary education policies and credentials. Although this report has pointed out some of the shortcomings and inconsistencies of Service education policies it was not intended to negate their usefulness. Not only do education standards presently (and admirably) assist in selection for service but with modifications they may be even more powerful in the future.

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Appendix A

Education Level Definitions for Enlistment in the Army

ARMY

Education Level Definitions for Enlistment Purposes (Non-Prior Service Regular Army)

- a. High school diploma graduate (HSDG)
An applicant is considered a bona fide high school diploma graduate if he--
- (1) Has earned a high school diploma from an established high school.
 - (2) Has a diploma from a foreign high school that has been properly evaluated and verified as prescribed in this regulation. For example, verification can be obtained by
 - (a) Passing the GED tests or
 - (b) Having transcripts evaluated by the State Board of Education or other agency designated by the State.
(Citizens of Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Northern Mariana Islands are exempted from this.)
 - (3) Has successfully completed a high school correspondence home study and has been awarded a certificate of completion or a diploma. The course must be accredited by the Accrediting Commission of the National Home Study Council.
 - (4) Did not complete high school, but has been accepted by an accredited college for full-time attendance and has successfully completed at least 15 semester hours or 22.5 quarter hours that have been graded and provides an official transcript of credits showing completion.
 - (5) Has been awarded or authorized a high school diploma by the State for a successfully completed adult education program. District Recruiting Command (DRC) commanders will insure that the adult education program is recognized by the State. If in doubt, DRC commanders will send the applicant's adult education program documentation through the Region Recruiting Command.
- b. High school graduate (HSG)
- (1) An applicant who has completed the 12th grade and who has a certificate of completion or letter instead of a diploma.

- (2) An applicant who has--
 - (a) Completed all course requirements for high school graduation.
 - (b) Received a certificate or letter of attendance, but
 - (c) Was not awarded a diploma or did not pass the comprehensive tests, if required.
- (3) Letter from the school attended, showing attendance of the entire 12th grade (senior year) and that the applicant did not drop out. Letter must be from the principal, vice principal, registrar, or the custodian of the school records.
- c. High school senior (HSSR). An individual who is a candidate for graduation within 365 days.
- d. General Education Development (GED)
 - (1) An applicant, 17 years or older, who has a GED certificate issued by the State or Job Corps.
 - (2) An applicant tested before age 18 who has a letter from the State agency that will ultimately issue the certificate stating that--
 - (a) The person meets State requirements.
 - (b) The certificate will be issued when he reaches the required age.
 - (3) Official GED test score sheet only if the score sheet--
 - (a) Reflects that the person meets State requirements.
 - (b) Is signed by an authorized State official.
 - (c) Constitutes the official document of certification by the State (i.e., State does not issue other certificates).
- e. Nonhigh school graduate (NHSG). A NHSG is an applicant who--
 - (1) Does not meet the requirements of a and b above. This includes applicants who did not complete high school but received an equivalency certificate, diploma, or certificate of completion (based on testing) from a State, county, municipal, or district board of education.

- (2) Has an occupational program certificate certifying he has attended and completed a vocational or technical trade school.
- (3) Attended but did not complete a vocational or technical trade school.

Trainability/Minimum Armed Service Vocational Aptitude Battery (ASVAB) Requirements

All applicants must meet the requirements of the option or options for which enlisting

ACRONYMS: HSDG—High School Diploma Graduate; HSG—High School Graduate; GED: General Educational Development Equivalency; NHSG—Non High School Graduate; and HSSR—High School Senior who is a candidate for graduation.

	Nonprior Service Regular Army			
	HSDG	GED	NHSG ¹	HSSR
93-100	X	X	X ²	X ²
85-92	X	X	X ²	X ²
50-84	X	X	X ²	X ²
31-49	X	X	X ²	X ²
16-30	X	--	--	X ²
00-15	--	--	--	--
Minimum number of qualifying ASVAB Aptitude Area Scores	1	1	2	1

NOTE: ASVAB Aptitude Qualification Scores (GT score will not be used to qualify NPS)
NPS: 85 or above

¹17-year old NHSG not eligible.

²In addition, if male and 17, applicant must score 62 or higher on Military Applicant Profile (MAP) and qualify on the Armed Forces Qualification Test (AFQT) and Aptitude Area Scores.

³If HSSR does not graduate and fails to meet definition of HSDG, applicant must meet the criteria of an NHSG.

Appendix B

Education Level Definitions for Enlistment in the Navy

NAVY

1-I-7a. Education Level Definitions for Enlistment Purposes (Non-Prior Service)

- (1) High School Diploma Graduate (HSDG). An applicant shall be classified as a High School Diploma Graduate for SCREEN (enlistment), Program Guarantee (except Nuclear Field) and statistical purposes when official documentation meeting the requirements of this paragraph is presented which indicates that the applicant has graduated from a public, private or religious school that confers graduate status based on completion of a 12 grade course of classroom instruction (resident status). Applicants receiving graduate status as a result of home study, equivalency, or competency testing are specifically excluded from classification as High School Diploma Graduates. In the case of schools not accredited, certified, registered or otherwise formally recognized by the state in which the applicant graduated, NAVCRUITDIST commanding officers shall ascertain that graduate status was conferred through completion of 12 grades of classroom instruction (resident status) and retain documentation of that finding (and the means of determination) in the applicant's residual file. It is emphasized that the purpose of classification regarding High School Diploma Graduate status is to provide an objective measure of an applicant's probability of successful completion of enlistment based upon the perseverance demonstrated by completion of 12 grades of organized classroom curriculum. It is incumbent upon commanding officers to ensure that classification of graduates of private and religious schools clearly meets that purpose. For Nuclear Field Program, the education criteria contained in paragraph 2-I-2c apply.
- (a) Formal high school diploma. Issued to individuals who have completed the 12th grade and graduated from a high school which meets the requirements of paragraph 1-I-7a(1) above.
 - (b) Certificate of completion. Issued to individuals who have completed the 12th grade in a high school which meets the requirements of paragraph 1-I-7a(1) above, and completed all requirements for graduation, passed the comprehensive test (if administered) and are issued a certificate of completion in lieu of a diploma.
 - (c) High school certificate of attendance. Issued to individuals who have completed the 12th grade in a high school which meets the requirements of paragraph 1-I-7a(1) above, and completed all course requirements for graduation, but did not pass the comprehensive test (if administered) or were not awarded a diploma.
 - (d) High school letter of attendance. A letter signed by a competent school official (i.e., superintendent, principal, registrar or admissions official) stating that the individual

completed the 12th grade and has, in addition, passed all courses which are required for a high school diploma in a high school which meets the requirements of paragraph 1-I-7a(1) above, but was not awarded a diploma due to failure to satisfy an additional graduation requirement such as passing a comprehensive test or attainment of sufficient overall grade average. This letter must also state it is being issued in lieu of a certificate of completion or certificate of attendance. Letters of attendance will not be accepted from those school districts which issue certificates of completion and/or certificates of attendance.

- (e) Adult High School Diploma. Awarded upon completion of an adult high school program which meets the requirements of paragraph (f) below.
- (f) Adult High School Diploma (AHSD) Procedures. Special importance is attached to the preservation of the high quality level reflected in the regular four-year high school diploma, and it should not be downgraded by relaxation of attendance and credit requirements used to award many AHSDs. The procedures contained in this paragraph are directed toward maintaining the high quality level. The following criteria/guidance is provided for administration of the adult high school diploma procedures:
 - (1) An adult high school program in which an applicant has participated and earned credit which is applied toward the award of an AHSD must be accredited by the state or one of the following regional accrediting agencies:
 - (a) New England Association of Schools and Colleges, Incorporated
 - (b) Middle States Association of Colleges and Secondary Schools
 - (c) Southern Association of Colleges and Secondary Schools
 - (d) North Central Association of Colleges and Secondary Schools
 - (e) Northwest Association of Secondary and Higher Schools
 - (f) Western Association of Schools and Colleges.

- (2) Adult high school programs must consist of a classroom curriculum leading to the awarding of the Adult High School Diploma. Diplomas, certificates, letters, etc., which are awarded based solely on equivalency testing, i.e., GED/CPT are not acceptable.

NOTE: Navy Recruiting Area Commanders who are unable to classify or otherwise determine the acceptability of credit shall refer the program/credit situation to COMNAVCRUITCOM (Code 20) for judgment and resolution.

- (3) Navy Recruiting Area Commanders shall, with the assistance of their Educational Specialists, formally review, evaluate and approve adult high school programs which function within their command areas, utilizing the criteria contained in paragraphs (1) and (2) above.
- (a) Area Commanders shall publish a listing of approved schools and programs, and any additional guidance, to the recruiting districts within their areas to provide for positive control and administration of AHSD procedures.
- (b) All approved adult high school programs must be reviewed/reapproved by Area Commanders on a biennial basis. The first review of presently approved programs shall be completed prior to 1 December 1981 and revised lists published as of that date. Lists shall be updated as necessary throughout the year as changes in a school's/program's status takes place.
- (c) A copy of each COMNAVCRUITAREA's approved adult high school listing shall be provided to COMNAVCRUITCOM (Code 20) and OINC SAT. Commands desiring to verify the status of a given school/program that lies outside the purview of the recruiting area may contact either the COMNAVCRUITAREA which, as a result of the school's location, would have cognizance over the school/program, or COMNAVCRUITCOM (Code 212) for verification of a given school's/program's status.
- (4) An applicant holding an Adult High School Diploma must provide a certified school transcript of adult high school credits, in addition to the diploma, prior to enlistment. A copy of the transcript shall be retained in the applicant's residual file. The transcript shall be inspected to ensure that the program and/or courses completed by the applicant meet the criteria set forth in paragraph (1) and (2) above.

- (5) Recruiting/processing personnel must ensure that Code "A" is entered in Block 65 of Item 21 of the DD Form 1966 for applicants who have received an adult high school diploma, as required by paragraph 8-I-2.
- (g) Associate of Arts or higher degree from an accredited junior college, college or university, whether or not the holder has achieved (a), (b), (c), (d) or (e) above.
- (h) Letter of intent to issue (a), (b), (c), (e) or (g) above from a high school, college or university and signed by a competent official, e.g., principal, dean, registrar, guidance counselor. All requirements for the formal document (a, b, c, e or g above) must be completed at the time the letter of intent to issue is dated and signed. This is not to be a letter of intent to graduate, complete high school, etc. The "letter of intent to issue" is intended for situations where there is an administrative delay between the completion of requirements and actual issuance of the formal document.
- (i) Letter of past issuance signed by an authorized school official (i.e., superintendent, principal, registrar or admissions official) indicating that the applicant has been issued the appropriate diploma, certificate or degree as defined in (a), (b), (c), (e) or (g) above. The "letter of past issuance" must contain the date that the diploma, certificate or degree was issued. Further, the "letter of past issuance" must be provided by the issuing agency directly to recruiting personnel either personally or by direct mail to avoid possible abuses and/or "manufactured" documents. The "letter of past issuance" shall be used in situations where the applicant has lost or misplaced the original document and obtaining a duplicate document is not possible. The DD Form 370 (paragraph 8-I-10) shall not be used as a "letter of past issuance."
- (j) Official transcripts may be used as acceptable documentation for High School Diploma Graduate (HSDG) status under the following conditions:
- (1) To be acceptable an official transcript must contain a dated formal entry of graduation or completion.
 - (2) The transcript must be signed by an authorized school official. In those cases where records have been transferred to a records center, the original signature and title of the employee of the governmental jurisdiction (city, county, state), who is authorized to provide the requested transcript, is required.

- (3) The issuing institution must provide the transcript either personally to concerned recruiting personnel or by direct mail to concerned recruiting personnel. Transcripts hand carried by applicants are not to be accepted by recruiting personnel for verifying HSDG status.

NOTE: The intent of this paragraph is to alleviate the difficulties encountered when requesting official transcripts from school systems which have closed and/or records have been transferred to a central repository or records center. It is not intended to circumvent the requirements to cite and/or obtain those documents defined in (a), (b), (c), (d), (e), or (g) above when available.

- (2) High School Graduate (HSG). A high school graduate is considered to be any person possessing any of the documents described in paragraphs (a) through (g) above or possessing:

- (a) Verification of successful completion of the GED test. Acceptable documentation is any one of the following:

(1) A state-issued GED certificate or Certificate of High School Equivalency based on successful completion of the GED test. These certificates must be signed by an authorized official of the State Department of Education or State Administrator of the GED testing program.

(2) A completed GED test results record, such as the Official Report of Test Results (GEDTS Form 30), containing the location of the GED testing center, the numerical scores for each test in the GED test battery, a positive indication that the overall grade for the GED test battery was "PASSED," and the signature of the Chief Examiner or the State GED Test Administrator.

(3) A letter of intent to issue a State Certificate of High School Equivalency or GED Certificate based on successful completion of the GED test signed by the Chief Examiner of an official GED Testing Center or the State Administrator of the GED Testing Program.

- (b) Verification of successful completion of the California Proficiency Test (CPT), or

- (c) Verification of successful completion of the high school course at a private home study (correspondence course) school which is accredited by the Accrediting Commission of the National Home Study Council.

In instances where the applicant does not possess verifying documents discussed in (a), (b), or (c) above, a "letter of past issuance" signed by the Chief Examiner of an official GED or CPT Testing Center, or the State Administrator of the GED or CPT Testing Program, or an authorized school official (i.e., superintendent, principal, registrar or admissions official) of a private home study (correspondence course) school, which indicates that the applicant has been issued the appropriate diploma or certificate, and provides the date that the diploma or certificate was issued, may be accepted as verification. The "letter of past issuance" must be provided by the issuing agency directly to recruiting personnel either personally or by direct mail to avoid possible abuse and/or "manufactured" documents. The "letter of past issuance" shall be used in situations where the applicant has lost or misplaced the original document and obtaining a duplicate is not possible. The DD Form 370 (paragraph 8-I-10) shall not be used as a "letter of past issuance."

1-I-7b. Eligibility. To be eligible for enlistment, applicants must meet the following education requirements and provide documentation as outlined in paragraph 8-I-2, item 40 of this manual to verify their education level.

- (1) All female applicants must be high school graduates (HSG) as defined in paragraph 1-I-7a(2).¹
- (2) Non-Prior Service (NPS) applicants with ASVAB AFQT scores of 17 to 30 inclusive must be high school diploma graduates (HSDG), as defined in paragraph 1-I-7a(1). Non-Prior Service applicants with ASVAB AFQT scores of 31 to 37 inclusive must be high school graduates (HSG) as defined in paragraph 1-I-7a(2).
- (3) Applicants for certain programs must meet high school graduation or course/grade requirements as contained in the applicable program chapter of this manual.

1-I-7c. Foreign Education. All education, with the exception of that received in the United States, Puerto Rico, Guam, the Virgin Islands of the United States, the outlying possessions of the United States (American Samoa and Swains Island), and at overseas Department of Defense-sponsored schools, is considered to be foreign education.

- (1) There are no known high school or college level reference sources available which provide an accurate correlation of standards between U.S. and foreign school curriculums.

¹Although this statement appears in 1983 Navy recruiting instructions, discussions with officials from the Navy Recruiting Command indicated that this statement appeared as a result of an oversight when the enlistment aptitude standards for females were changed in 1982 to correspond to those for males. Subsequent changes to Navy recruiting instructions will rectify this situation.

- (2) Foreign education may, however, be recognized for enlistment (SCREEN) purposes for all applicants for whom the application of the SCREEN is required. Procedures set forth below are to be followed.
- (3) Foreign education may, in addition, be recognized for enlistment program purposes for U.S. citizens educated outside the United States in foreign schools. Procedures set forth below are to be followed.
 - (a) All foreign education documents, e.g., diplomas, certificates and degrees, with complete transcript, if available, are to be submitted to the COMNAVCRUITAREA for a case-by-case evaluation and determination of the equivalent U.S. education grade level.
 - (b) The COMNAVCRUITAREA Education Specialist or, in his/her absence, the COMNAVCRUITAREA Enlisted Programs Officer, will review the documents, using the "Country Index - Interpretation For Use in the Evaluation of Foreign Secondary Education Credentials" and "Glossary of Foreign Education Terms." Upon determination of the education level equivalency, the COMNAVCRUITAREA will telephonically inform the NAVCRUITDIST.
 - (c) For enlistment (SCREEN) purposes, the following guidance is to be followed: In those cases where applicants have been awarded a foreign diploma and attended 12 or more years of school, they are considered to be a HSDG for SCREEN purposes. Applicants who have been awarded a foreign diploma but attended less than 12 years of school are considered to be a GED for SCREEN purposes. Those who have not been awarded a diploma, regardless of the number of years of school attended, will be considered a NHSG ("NEITHER" on SCREEN table) for SCREEN purposes.
 - (d) For program purposes (applicable only to U.S. citizens educated outside the United States in foreign schools), the following guidance is to be followed: In those cases where the Country Index indicates that the applicant's duly credited foreign school education is the equivalent of U.S. school education (i.e., a 12-year education program which is considered for U.S. placement purposes to be at the college freshman level), the applicant is considered, with regard to education criteria, to be

qualified for all programs except the Nuclear Field (NF) Program. For NF Program applicants, an education waiver is required in accordance with paragraph 1-I-/d.

Source: Department of the Navy. (1983, August 1). Navy recruiting manual: Enlisted (COMNAVCRUITCOMINST 1130.8B CH-19). Arlington, VA: Navy Recruiting Command.

Appendix C

Education Level Definitions for Enlistment in the Marine Corps

MARINE CORPS

Education Level Definitions for Enlistment Purposes (Non-Prior Service)

- a. Definition of a High School Graduate for Accession Purposes. Applicants who attended high school through the 12th grade and present either a letter so certifying, a high school graduate diploma, or a certificate of attendance or completion will be accessed as high school graduates. Nonhigh school graduates who have successfully completed 1 or more years of college-level work, regardless of level of high school, will be considered as high school graduates. In such instances the individual must present a copy of college transcripts which must reflect a minimum average of "C" for a minimum of 30 semester or 45 quarter hours. Applicants demonstrating successful completion of a high school correspondence home study program which is accredited by the National Home Study Council will be enlisted as high school graduates.
- b. General Education Development (GED) Certificates. Certificates of high school equivalency based on successful completion of the GED test, letters in lieu of this certificate, or test results from the GED will not be considered the same as a high school graduate defined in the previous paragraph. Holders of GED certificates will be accessed as non high school graduates.
- c. Verification and Certification of Education Level. The level of education of each applicant will be certified as follows:
 - (1) High School Graduate. Each applicant will be required to present an original copy of either a diploma, completion or attendance certificate, transcript, or official correspondence from the school the individual attended indicating attendance through the 12th grade. In instances where a letter from the school is required to verify completion or attendance through the 12th grade, the reason the individual did not qualify for a diploma must be specified.
 - (2) High School Correspondence Home Study Program. Applicants who have completed a high school correspondence home study program will be required to furnish two original documents for verification of education:
 - (a) Certificate from institution indicating completion of course.

- (b) Letter certifying that the institution is accredited by the National Home Study Council.
- (3) Nonhigh School Graduates. Each applicant will be required to present original official correspondence from the school attended, certifying the level of education attained, or a properly authenticated copy of the individual's high school transcript.

Source: Department of the Navy. (1979, June 18). Military personnel procurement manual. Volume 4: Enlisted Procurement (MPPM ENLPROC). [MCOP1100.74A]. Washington, DC: Headquarters, United States Marine Corps.

Appendix D

Education Level Definitions for Enlistment in the Air Force

AIR FORCE

Minimum Educational Requirements for Enlistment

There are no minimum educational requirements, however mental and aptitude test score requirements differ between high school and nonhigh school graduates.

MINIMUM MENTAL AND APTITUDE QUALIFICATIONS

R	A	B	C	D
U E L	If enlistment category is	and educational level is	then AFQT score required is	and minimum enrollment aptitude score required is
1	NPS	non-HS graduate	65 to 99	MAGE composite 120 plus general score of 30*
2		HS graduate or higher	21 to 99	
3		State certified GED	50 to 99	
4		HS senior	21 to 99	

*NPS six-year enlistees must be high school diploma graduates, have minimum general aptitude score of 40, a MAGE composite of 145, and a minimum AFQT of 21.

Definitions of Educational Level for Enlistment in the Air Force (Non-Prior Service)

High School Graduate

1. Applicants possessing high school diploma issued by a high school authorized to issue diplomas by the applicant's state or jurisdiction. State certification is required for enlistment as an HS graduate equivalent.
2. Applicants possessing a Certificate of Proficiency issued by the California State Board of Education are considered equivalent to high school diploma graduates.
3. Applicants possessing HS diplomas issued by schools authorized to grant such diplomas in the Virgin Islands, Canal Zone, Guam, and America Samoa should be recognized as valid.

4. Applicants educated in schools not in the American educational system must have an evaluation prior to enlistment to qualify as high school graduate or higher. Such evaluation may be obtained through a State Department of Education, 4-year state college or university, or accredited credentials evaluation agencies. The evaluation must specify the applicant's education level (high school graduate or higher). The applicant is responsible for any fees required. As an alternative, such applicants may elect to apply for the state certified GED equivalence.
5. Applicants possessing a diploma or certificate attesting to high school completion through home study (correspondence) provided the school is recognized by the Accreditation Commission of the National Home Study Council, and authorized by the applicant's State or other jurisdiction to issue diplomas and (or) certificates.
6. Applicants who have satisfactorily completed 15 or more semester hours of college credit from a regionally accredited college or university.¹

GED

1. Official certificate of equivalence (GED) or letter of intent (to issue a certificate of equivalence) issued by the applicant's state or jurisdiction.
2. A completed GEDTS Form 30 is acceptable when accompanied by a letter of intent to issue a GED certificate, or when authorized by the applicant's state or jurisdiction in lieu of a "letter of intent." Letters of intent may be accepted regardless of restrictions on age or class graduation.
3. High school diplomas issued by state agencies based solely upon GED completion are equivalent to GED certificates. Determine eligibility based on mental and aptitude scores (table 9-1) as State Certified GED. High school diplomas issued by state agencies based on additional courses required to graduate (via adult education, community college, etc.) are acceptable as high school diplomas provided the applicant furnishes proof that courses were satisfactorily completed (official transcripts) and the diploma was issued as the result.

¹Although the official Air Force Regulations which served as sources for this information do not state a requirement that a college or university be accredited, personal communication with United States Air Force Headquarters indicated this to be the case.

Sources: Department of the Air Force. (1982, August 31). Military personnel procurement: Recruiting procedures for the United States Air Force (ATCR 33-2). Randolph Air Force Base, TX: Headquarters Air Training Command; Department of the Air Force. (1980, March 7). Military Personnel Procurement: Enlistment in the United States Air Force (AFR 33-3). Washington, DC: Headquarters, U.S. Air Force.